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AUTHOR	Brown, Gavin; Dunn, Karyn
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ABSTRACT

Designed to be used with the New Zealand curriculum framework, this slide presentation defines "information literacy," gives an information literacy overview, proposes 10 questions that students need to ask themselves, and provides student educational objectives for information skills. The report presents an essential skills assessment formula for primary (years 5 and 6), intermediate (years 7 and 8), and secondary (years 9 and 10) grade. It offers examples of definitions and discusses persuasive language and positive, negative, and neutral writing for intermediate and secondary grades, as well as ambiguity for secondary grades. It then focuses on evaluating information in text and finding information in prose text for intermediate and secondary levels. Contains 13 references. (NKA)

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Finding Details, Main Ideas, & Good Sources: How Information Literate Are NZ Students?

by Gavin Brown

Karyn Dunn

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Finding Details, Main Ideas, & Good Sources: How Information Literate Are NZ Students?

A Research Report to the International Reading Association 18th World Congress, Auckland, July 11-14, 2000

Gavin Brown & Karyn Dunn

New Zealand Council for Educational Research

- PO Box 3237, Wellington, New Zealand, 6000
- Email:
  - gavin.brown@nzcer.org.nz
  - karyn.dunn@nzcer.org.nz

What is Information Literacy?

- "The ability to access, evaluate, and use information from a variety of sources." C. Doyle

- **Cognitive problem-solving** approach to a wide variety of information needs
  P. Moore

Information Literacy in School Work

Table 1: Information Literacy Overview

Before	Use Pertinent Knowledge Bases	Develop Ideas Pertinent to Problem	Develop Problem-solving Goals	Plan Processes	Use Pertinent Affective Traits
During	Find Sources	Appraise Sources	Comprehend Content of Sources	Apply Content to Problem	Create Solution to Problem
After	Present Answer	Evaluate Answer	Evaluate I.L. Processes		

Questions Students Need to Ask Themselves

- *What is the problem I have that information will help solve?*
- *What exactly do I need to know?*
- *How do I get the information I need to answer my problem?*
- *How do I know which information to trust?*
- *How is the information I have found relevant to my problem?*
- *What does the information I have selected mean?*
- *How do I put all the information together with what I already know so that I can create a solution for my problem?*
- *How do I share my solution with others?*
- *How do I know that my solution is any good?*
- *How do I know that the processes I used are any good?*

- Cognitive stages: knowledge, comprehension, application, analysis, synthesis, evaluation

The NZ Curriculum Framework

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Information Skills

- **Students will:**
  - identify, locate, gather, retrieve, and process information from a range of sources;
  - organise, analyse, synthesize, evaluate, and use information;
  - present information clearly, logically, concisely, and accurately;
  - identify, describe, and interpret different points of view, and distinguish fact from opinion;
  - use a range of information-retrieval and information processing technologies confidently and competently.
    - *NZ Curriculum Framework, 1993, p. 18*

Essential Skills Assessment

Primary – Years 5 and 6	*Intermediate – Years 7 and 8*	*Secondary – Years 9 and 10*
Finding Information in Reference Sources	Finding Information in Reference Sources	
Finding Information in Books	Finding Information in Books	
Finding Information in a Library	Finding Information in a Library	Finding Information in a Library
Finding Information in Graphs and Tables	Finding Information in Graphs and Tables	Finding Information in Graphs and Tables*
	Finding Information in Prose Text	Finding Information in Prose Text
	Evaluating Information in Text*	Evaluating Information in Text*
Teacher Rating Scale*	Teacher Rating Scale*	Teacher Rating Scale*
Student Self-Rating Scale*	Student Self-Rating Scale*	Student Self-Rating Scale*

** available in September 2000*

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THE ESA:IS TESTS

- replace the PAT Study Skills.
- are designed for formative assessment.
- are group administered.
- require 30 minutes testing time.
- can be used at any time between March and November.
- contain a range of item and question types – the tests are not predominantly multiple-choice.
- cover two years at each level, so that the tests may be used to identify strengths and weaknesses and monitor progress over time.
- can be used for comparative purposes as each student's score can be converted into a stanine.

ESA:IS Descriptions

- The six test modules are:
  - 1. *Finding Information in Reference Sources.* Knowledge of sources, directories, encyclopedias, and dictionaries are all included in this test.
  - 2. *Finding Information in Books.* Students knowledge of alphabetical order, parts of books, indexes, and table of contents are all assessed in this test.
  - 3. *Finding Information in a Library.* This test focuses on locating information in a library and on the selection of relevant, current, and authoritative items.
  - 4. *Finding Information in Graphs and Tables.* In this test a student's ability to comprehend simple and complex graphs and tables are assessed.
  - 5. *Finding Information in Prose Text.* The ability to rapidly scan for information and to take notes from expository text are assessed in this test.
  - 6. *Evaluating Information in Text.* This test assesses skill in differentiating positive, negative, and neutral statements, facts from opinions, identifying assumptions and correct conclusions, along with other evaluative skills.
- The two rating scales are:
  - 1. *Teacher Rating Scale.* This rating scale is designed to complement the tests and to provide broader information for the teacher. It comprises both an observation checklist and a rating scale.
  - 2. *Student Self-Rating Scale.* This enables students to evaluate themselves by determining how confident they would be or how difficult it would be for them to do a given task.

Sub-Sections of ESA:IS
Evaluating Information in Text

Intermediate Test	Curriculum's Info Skills	
Recognising Opinions	Fact and Opinion	(4)
Positive, Negative, and Neutral Writing	Analyse and Evaluate	(2)
Recognising Assumptions	Analyse and Evaluate	(2)
Conclusions	Analyse and Synthesize	(2)
Writing on a Topic	Identify Information	(1)

Secondary Test	Curriculum's Info Skills	
Recognising Opinions	Fact and Opinion	(4)
Identify Persuasive Language	Analyse and Evaluate	(2)
Positive, Negative, and Neutral Writing	Analyse and Evaluate	(2)
Ambiguity	Analyse and Evaluate	(2)
Recognising Assumption	Analyse and Evaluate	(2)
Conclusions	Analyse and Synthesize	(2)
Relevance of Information	Identify Information Interpret Views	(1) (4)

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Examples of Definitions

- **Recognising Assumptions**
  - An **assumption** is something that is thought to be true without proof.
- **Identifying Persuasive Language**
  - **Persuasive language** tries to influence you to a certain course of action. For example, advertising aims to convince you to buy a product.

Intermediate

- Positive, Negative, and Neutral Writing

Underline the **one sentence** which is **negative** about the rugby game between the Cheetahs and the Drifters.

Saturday's weather resulted in adequate ground conditions for all the games played. The match between the Cheetahs and the Drifters was fast and intense. The Drifters showed well developed attacking tactics and played a defensive game. The Cheetahs' game wasn't to their usual standard. The Drifters' win puts them second on the points table.

- Y7 – 56%; Y8 – 68%

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Secondary
-Positive, Negative, and Neutral Writing

Almost everyone on the planet loves Titanic. It already qualifies as one of the box-office champions of all time. Director James Cameron has provided the physical spectacle of the year, however, and for mere technical know-how it is mighty impressive. Beyond that, the wonder fades. There's all that potential human drama on board, but the script can only conjure up repetitive scenes with nasty Billy Zane. Why wasn't he just given a mustache to twirl? A glowing Kate Winslet does manage to light up the screen from time to time. Mr. DiCaprio pales, however, when he shares the screen with Winslet.

Overall, this review is: ***positive*** (***negative***) ***neutral***
(circle one)

- Y9 – 37%; Y10 – 43%

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Intermediate – **Conclusions**

Approximately one hundred thousand tuatara live in about thirty islands off the coast of New Zealand. Tuatara live for up to one hundred years. The males can grow up to sixty centimetres long, and they take up to thirty years to reach their full size.
Tuatara live in burrows, and their young hatch out from eggs. On sunny days, tuatara sunbathe just outside their burrows, storing heat from the sun. At night, they come out to hunt insects, such as beetles and weta. They also eat lizards, seabirds and their eggs, and even baby tuatara. Tuatara have very good eyesight, and the pupils of their eyes expand in the dark so that they can see at night.

i) "Tuatara do not have good sight in daylight."

Is this conclusion correct? **Yes** or **No** *(circle one)*

ii) "Male tuatara can take up to approximately one third of their life to reach full size."

Is this conclusion correct? **Yes** or **No** *(circle one)*

- Y7 – 45%; Y8 – 50%

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Secondary - Ambiguity

According to the brochure, the house was built roughly in 1920.

This sentence is **ambiguous** as it has two very different meanings. One possible meaning is that the house was not very well built. What is the other possible meaning of the sentence?

The house was built *in approximately 1920*

- Y9 – 58%; Y10 – 69%

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Standardisation Results

ESA:IS Evaluating Information in Text

Year	Mean	Number	Standard Deviation	Standard Error of Mean	Alpha Coefficient
Y7	47%	538	22%	2.25	0.83
Y8	56%	523	22%	2.20	0.84
Y9	48%	509	20%	2.23	0.80
Y10	54%	484	20%	2.26	0.81

Standardisation Results

ESA:IS Evaluating Information in Text

	Intermediate		Secondary	
	Mean	Number	Mean	Number
Female	54%	492	51%	498
Male	49%	569	48%	495
Decile 1-3	44%	302	39%	261
Decile 4-7	55%	394	49%	337
Decile 8-10	59%	365	58%	279

Difficulty of Sections
ESA:IS Evaluating Information in Text

Intermediate		Secondary	
Writing on a Topic	55%		
Opinions	53%	Opinions	59%
		Persuasiveness	52%
Assumptions	52%	Assumptions	52%
		Ambiguity	52%
+ve, -ve, and neutral	52%	+ve, -ve, and neutral	51%
Conclusions	45%	Conclusions	47%
		Best Information	43%

Growth Between Years

ESA:IS Evaluating Information in Text

Overall

Intermediate (Y7-8)	9%	Secondary (Y9-10)	6%

Subsections

Intermediate		Secondary	
Assumptions	12%	Ambiguity	14%
+ve, -ve, and neutral	9%	Best information	9%
Writing on a topic	8%	Conclusions	6%
Opinions	8%	Persuasiveness	6%
Conclusions	6%	Assumptions	5%
		+ve, -ve, and neutral	5%
		Opinions	4%

Correlations

ESA:IS Evaluating Information in Text

SECONDARY (Year 10)

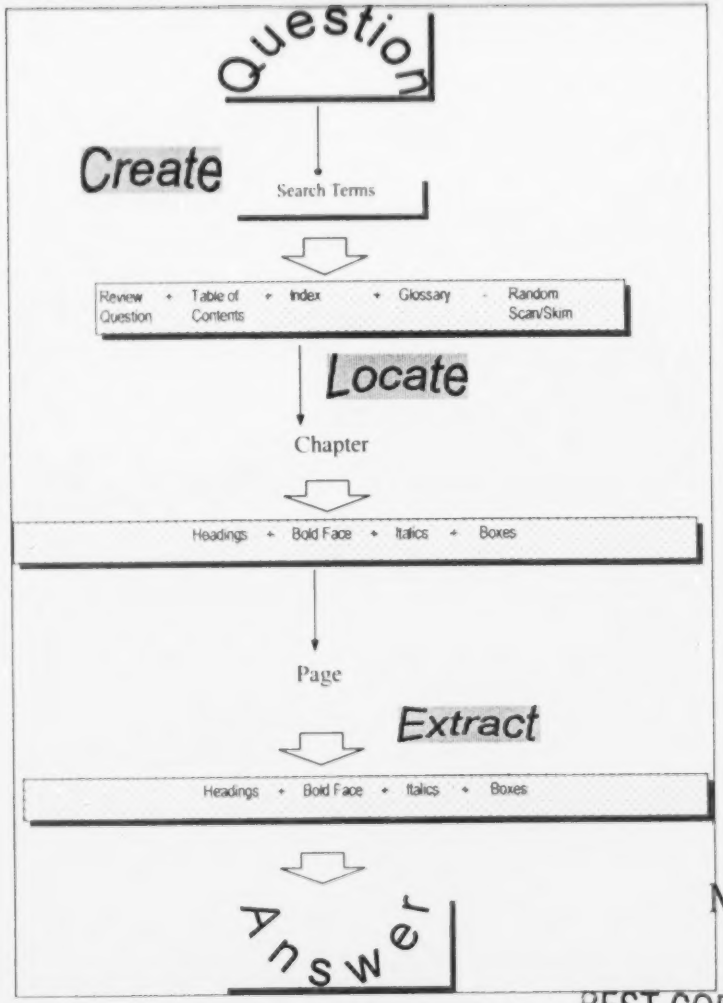
	Test of Scholastic Abilities (N=129)	PAT: Reading Comprehension (N=79)
ESA:IS	0.76	0.84

Prose Texts

Prose	Documents	Hypertext
• Text books	• Tables	• Cd-Rom
• Encyclopedia entries	• Charts, graphs	• World Wide Web
• Journal articles	• Maps	
• Manuals	• Diagrams	

- **Importance**
  - Widespread, Reliable, Authoritative Sources of Information
  - Information Text Genre Powerful in 'Information Age'
  - Competence Requires Exposure *(Duke, 1999)*

Finding Information in Prose Text Model



Model from Dreher, 1992

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Reading Processes

- Reading to Locate *(Dreher, 1993; Guthrie & Kirsch, 1987)*
  - Not read to learn but to look up or consult, & record
  - Strategic selective reading to locate specific, goal-related information
  - **Skimming or Scanning**
    - Rapid location of information that matches search requirements by seeking key elements
  - **Outlining & Organisation**
    - Detecting & using order of prose text to enhance location & extraction of information

Text Cues for Finding Information

ESA:IS Prose Coverage	Signaling Devices	Typography	Writing Style	Structure
	•Headings •Sub-headings •Titles	•Bold •Italic •Underline •Font face •Capitalisation •Quotation marks		•Organisation •Linearity •Supportive graphics •Sections & sub-sections •Paragraphing •Topic sentences
	•Labels •Row & column markers		•Vocabulary •Syntactic complexity •Relative clauses •Passive voice	•Coherence •Sidebars •Table of contents •Index •Glossary

Task Requirements Present in Assessments

- Task difficulty
  - declarative verbatim
  - incorporation of parts

  (O'Donnell, 1993)
- Task Factors
  - Search term given
  - Complexity
    - Single
    - Multiple

  (Dreher, 1992)
- Question types
  - Text explicit
  - Text implicit

  (Arbruster & Armstrong, 1993)
- Distance
  - Cue to Answer
    - Close= 1-3 words
    - Far= 4+ words
    - Inference= in other words

Student Requirements

- Prior Knowledge
  - Topic or Content
  - Vocabulary
- Reading Proficiency
  - Strategic Capability
    - Adjust speed
    - Notice structures
    - Analyse task requirements
  - Fluency or Speed

(Arbruster & Armstrong, 1993; O'Donnell, 1993)

Using Organisation to Locate Information

- Idea/Gist *(Chambliss, 1995)*
  - Structure Strategy
    - Informational Text
      - Generalisation,
      - Sub-topics,
      - Evidence
    - Not same as Argument Texts
- Titles *(León & Carretero, 1995)*
  - Identify Principal Logical Relationship in Text
- Headings *(Lorch & Lorch, 1995)*
  - Signaling Aids Recognition of Organisation

Mean Results*

ESA:IS Finding Information in Prose Text

- Skim/Scan easier than Organise/Note-make
- Higher Years outperform Lower by small margin
- Girls outperform Boys by small margin
- High Decile outperform Lower Decile
- **Comments**
  - Range in every Decile is Nil to Maximum
  - High Correlation with PAT Reading Comp (0.8@Y8)
  - Full range not detected due to test construction

**all results statistically significant*

Easy Results

ESA:IS Finding Information in Prose Text

- Intermediate & Secondary
  - Skimming/Scanning
  - Typographic cues
  - Declarative Verbatim, Text Explicit
  - Single Complexity, Answer Near Clue Word
- Achievement Levels
  - Intermediate: 80% Avg; 7 items
  - Secondary: 70% Avg; 6 items

Hard Results

ESA:IS Finding Information in Prose Text

- Intermediate & Secondary
  - Notemaking
  - Incorporation of Parts, Text Implicit
  - Multiple Complexity & Answer Inferred from Clue
- Format
  - Intermediate: Graphic (Linear not tested)
  - Secondary: Linear (Graphic not tested)
- Achievement Levels
  - Intermediate: 50% Avg; 7 items
  - Secondary: 40% Avg; 6 items

Implications from ESA:IS Standardised Testing

- Teachable Structures & Strategies Exist
  - Information Texts
    - Schema Cues, Typography, Organisation, Notes
  - Evaluating Information
    - Opinions, Assumptions, Conclusions, Bias, Conclusions, Relevance
- These Info Skills have Strong Connection to General Reading Comprehension
- Students Require Practice
- Teachers Need Experience & Training

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